

Appl. No. 09/992,996  
Amdt. Dated November 12, 2003  
Reply to Office Action of August 12, 2003

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-5 remain in the application. Claims 1 and 3-5 are subject to examination and claim 4 has been withdrawn from examination. Claims 1 and 5 have been amended.

In item 1 on page 2 of the above-identified Office Action, claims 1-3 and 5 have been rejected as being unpatentable over Ballmann et al. (U.S. Pat. 5,887,553) (herein "Ballmann") in view of Voros, Jr. (U.S. Pat. 3,670,188) (herein "Voros") under 35 U.S.C. § 103(a).

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application.

Support for the changes is found on page 8, line 8 to page 10, line 17 of the specification of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 1 calls for, *inter alia*, an electromagnetic actuator, having:

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at least one electromagnet having a coil and a first contact surface; and

a connector having at least one contact element electro-conductively connected to the coil of the electromagnet, the contact element being electrically contacted by an assembly contacting element upon the connector engaging a connector receptacle.

Accordingly, the present invention provides an electromagnetic actuator. The actuator contains at least one electromagnet having a coil and a first contact surface; a second contact surface; at least one resetting device; and an armature having a shank mechanically coupled to the resetting device. The armature is movable between the first contact surface on the electromagnet and the second contact surface. A connector having at least one contact element is electro-conductively connected to the coil of the electromagnet and disposed such that, at least during assembly of the actuator onto a support, the contact element can be electrically contacted by an assembly contacting element. The connector also receives a connector receptacle.

In accordance with an added feature of the present invention, the connector has an opening formed therein, and the contact

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element has a region configured as a service contact that is led through the opening in the connector. The service contact, at least during the assembly of the actuator onto the support, can be electrically contacted by the assembly contacting element.

The Ballmann reference discloses an electromagnetic actuator having at least one electromagnet with a coil and a first contact surface; a second contact surface; at least one resetting device; a movable armature having a shank mechanically coupled to the resetting device and movable between the first and second contact surfaces. Ballmann also discloses a support for mounting the electromagnet and the armature. The Examiner acknowledges that Ballmann does not disclose several claimed features (at least five are listed on page 3 of the above-identified Office Action) of the present invention. Ballmann, inter alia, does not disclose a connector having at least one contact element electro-conductively connected to the coil of the electromagnet and configured to cause the contact element to be electrically contacted by an assembly contacting element and also to be engaged with a connector receptacle. Ballmann does not disclose that the support has a contacting element. Nor does Ballmann disclose that the connector has an opening formed therein.

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The Examiner states that Voros discloses a connector (24) having at least one contact element (29) electro-conductively connected to the coil(8) of the electromagnet. The connector (24) is part of the upper portion (20) of the housing and is not a connector for connecting the contact element (29) electro-conductively to a source, that is, contacting the contact element (29) electrically to the coil 8 of the electromagnet. The Examiner also states that Voros discloses a connector receptacle (24, 27, 28, 38, 39). It is respectfully pointed out that spaced guides (27) are integrally formed with the circuit closer (21) (see col. 2, lines 35-40), which the Examiner states is part of the connector. The only disclosure in Voros of a connector is the protruding portion (41) of an immobile contact arm (33) and a closure (40) of electrically conductive material. This is a male connector plug, which presumably can be plugged into a female connector plug (not shown). From the Examiner's statements it is apparent that the connector (24) of Voros is not a connector for connecting the coil electrically with the source. The Examiner further states that Voros discloses a service contact (23) which can be electrically contacted by the assembly-contacting element. An important difference between Varos and the claimed invention is that in the present invention the opening of the connector (e.g., refer to dependent claim 2) is the opening through which the assembly-

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contacting element can be contacted to the connector. In Varos, the opening is used to secure the screw or service contact (23) in the housing or connector (24).

Varos does not disclose a service contact led (in an oil-proof-manner) through the opening in the housing of the connector as recited in claim 2. The reason for this is, that there is no oil within the housing made of the lower part (1) and the upper part (2). Consequently, there is no need at all to lead the service contact (in an oil-proof-manner) through the opening of the housing.

Further, it is stated by the Examiner that the coil (8) can be electrically connected using the elements (24, 27, 28, 38, 39). If the coil (8) is electrically connected through these parts the contact element (23) cannot be connected electrically by an assembly contacting element, because the screw or service contact (23) is in the interior of the housing made by the upper part (2) and the lower part (1) and cannot be reached by a screwdriver or similar tool.

Voros does not disclose electrically connecting the contact element with an assembly contacting element, even if that connector is engaging a connector receptacle, as recited in the claims. For this reason, it would not have been obvious

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at the time the invention was made to modify the actuator of Ballmann and provide it with the connection configuration of Varos.

Varos does not disclose a contact element that is electrically contacted by an assembly contacting element as recited in the claims of the instant application.

Thus, it is submitted that even a combination of Voros with Ballmann would not result in the claimed invention.

The Examiner wrongly contends that "[i]t would have been obvious...to modify the actuator of Ballmann et al. and provide it with the connection configuration for the purpose of providing a pair of normally open electrical contacts so assembled that they may be simply plugged into a socket and extracted therefrom when replacement is necessary."

Applicants submit that this statement is incorrect and without proper basis, and merely wishful thinking on the part of the Examiner. The only reasons for combining the references as proposed is because of applicants' claimed invention. The Examiner has analyzed the claimed invention and in the several instances where the primary Ballmann reference is deficient has arbitrarily taken bits and pieces from Varos and alleged

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that it would be obvious to combine Ballman and Varos. However, Ballmann does not disclose any need or reason to be modified as proposed by the Examiner. One skilled in the art would not seek out a secondary reference unless there was a reason in the primary reference that justified or required modification. In this instance, it is submitted that the Examiner has not shown any reason to modify Ballmann as proposed and that any motivation is contained only in the secondary reference of Varos. This is insufficient reason to warrant any modification of Ballmann and certainly does not support the proposed combination of Ballmann and Varos.

Further, the Examiner has stated that he has not given any patentable weight or consideration to "method of manufacturing limitations", namely, "...causing the contact element to be electrically contacted by an assembly contacting element, even upon said connector engaging a connector receptacle." The actual limitation the Examiner is referring to in present claim 1 is "said contact element being electrically connected by an assembly contacting element upon said connector engaging a connector receptacle." Applicants submit that this claimed feature should be given patentable weight pursuant to MPEP § 2173.05(g). The claim limitation recites a structural feature, namely the contact element and its function, namely, " said contact element being electrically contacted by an

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assembly contacting element upon said connector engaging a connector receptacle." This functional or operational language is associated with a structural element (the "contact element") which should be evaluated and analyzed like any other claim limitation. The Examiner's dismissal of the limitation is wrong and not in accordance with the aforesaid MPEP section.

Clearly, the references do not show "a connector having at least one contact element electro-conductively connected to said coil of said electromagnet, said contact element being electrically contacted by an assembly contacting element upon said connector engaging a connector receptacle", as recited in claim 1 of the instant application. (emphasis added) Claim 5 contains similar limitations.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1 and 5. Claims 1 and 5 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1.

In view of the foregoing, reconsideration and allowance of claims 1-5 are solicited.



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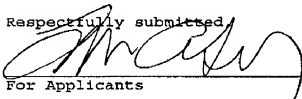
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In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

  
For Applicants

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